

Amendment and Response  
NOR-099  
U.S.S.N. 10/040.975  
Page 3

Amendments to the Claims:

Please amend the claims to read as follows:

- 1 1. (Currently amended) A method for routing a packet comprising:  
2 dedicating a separate routing table to each domain of a plurality of  
3 domains for use in routing packets propagating that domain;  
4 receiving the packet from one of a the plurality of domains through  
5 one of a plurality of interfaces; and  
6 determining one of a ~~plurality of~~ the routing tables for the packet  
7 according to a mapping array, the mapping array including pointers that  
8 associate the interfaces with the routing tables.
- 1 2. (original) The method of claim 1 further comprising executing a single IP  
2 stack to receive the packet and determine the one routing table.
- 1 3. (original) The method of claim 1 wherein the mapping array associates  
2 interfaces connecting to the same address domain with the same routing  
3 table.
- 1 4. (original) The method of claim 1 further comprising, after the one routing  
2 table is determined, forwarding the packet according to the one routing  
3 table if the packet is a data packet.

Amendment and Response  
NOR-099  
U.S.S.N. 10/040,975  
Page 4

1 5. (original) The method of claim 1 further comprising, after the one routing  
2 table is determined, updating the one routing table if the packet is a  
3 route update packet.

1 6. (original) The method of claim 1 wherein each of the plurality of address  
2 domains represents a virtual private network.

1 7. (Currently amended) A router comprising:

2 a plurality of separate routing tables, each routing table being  
3 dedicated to one of a plurality of address domains for use in routing  
4 packets propagating that address domain;

5 interfaces through which packets from the address domains are  
6 received; and

7 a domain manager, which includes a mapping array for  
8 determining one of a ~~plurality of~~ the routing tables for the received  
9 packets, the mapping array including pointers that associate the  
10 interfaces with the routing tables.

1 8. (original) The router of claim 7 wherein the domain manager executes  
2 a single IP stack to receive the packet and determine the one routing  
3 table.

Amendment and Response  
NOR-099  
U.S.S.N. 10/040,975  
Page 5

- 1 9. (original) A router of claim 7 wherein the mapping array associates  
2 interfaces connecting to the same address domain with the same routing  
3 table.
- 1 10. (original) The router of claim 7 wherein the domain manager forwards  
2 the packet according to the determined one routing table if the packet is  
3 a data packet.
- 1 11. (original) The router of claim 7 wherein the domain manager updates  
2 the determined one routing table if the packet is a route update packet.
- 1 12. (original) The router of claim 7 wherein each of the plurality of address  
2 domains represents a virtual private network.
- 1 13. (Currently amended) A computer program product residing on a  
2 computer readable medium comprising instructions for causing the  
3 computer to:

Amendment and Response  
NOR-099  
U.S.S.N. 10/040,975  
Page 6

4           dedicate a separate routing table to each domain of the plurality of  
5           domains for use in routing packets propagating that domain;  
6           receive the packet from one of a plurality of address domains  
7           through one of a plurality of interfaces; and  
8           determine one of a ~~plurality of~~ the routing tables for the packet  
9           according to a mapping array, the mapping array including pointers that  
10          associate the interfaces with the routing tables.

1   14.   (original)   The computer program product of claim 13 further  
2          comprising instructions for causing the computer to execute a single IP  
3          stack to receive the packet and determine the one routing table.

1   15.   (original)   The computer program product of claim 13 wherein the  
2          mapping array associates interfaces connecting to the same address  
3          domain with the same routing table.

1   16.   (original)   The computer program product of claim 13 further  
2          comprising instructions for causing the computer to, after the one  
3          routing table is determined, forward the packet according to the one  
4          routing table if the packet is a data packet.

1   17.   (original)   The computer program product of claim 13 further  
2          comprising instructions for causing the computer to, after the one

Amendment and Response  
NOR-099  
U.S.S.N. 10/040,975  
Page 7

3 routing table is determined, update the one routing table if the packet is  
4 a route update packet.

1 18. (original) The computer program product of 13 wherein each of the  
2 plurality of address domains represents a virtual private network.

1 19. (new) A method for routing a packet, comprising:  
2 dedicating a separate routing table to each address domain of a  
3 plurality of address domains;  
4 connecting at least one interface to each address domain of the  
5 plurality of address domains;  
6 associating each interface with one of the separate routing tables;  
7 receiving the packet from a given one of the plurality of address  
8 domains through a given one of the plurality of interfaces; and  
9 associating the packet with the given interface through which the  
10 packet is received; and  
11 selecting one of the separate routing tables for routing the packet  
12 based on the given interface with which the packet is associated.

1 20. (new) The method of claim 19, wherein the step of associating the packet  
2 with the given interface includes inserting an identifier of the given  
3 interface into the packet.